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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/388,831	09/01/1999	GREGORY EUGENE BORCHERS	8371-30	4488

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EXAMINER

AN, SHAWN S

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 07/15/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/388,831

Applicant(s)
Gregory Borchers

Examiner
Shawn An

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2613



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Apr 29, 2003
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 12, 14-17, and 36-42 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 12, 14-17, and 36-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other: _____

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DETAILED ACTION

Response to Amendment

1. As per Applicant's instructions in Paper 8 as filed on 4/29/03, claims 1-4, 12, have been amended, claims 7-11, 13, 18-35 have been canceled, and claims 36-42 have been added.

Response to Remarks

2. Applicant's arguments with respect to claims 1-6, 12, and 36-42 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6, 12, and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yui (5,677,741) in view of Ueda et al (5,986,642) and Atkinson (5,589,898).

Regarding claim 1, Yui discloses a real time video system for displaying color images that are adjusted from original color images encoded in a video signal, comprising:

a decoder (Fig. 8, 87) for decoding the video signal into at least one original color signal;

a compensation processor (Fig. 7, 80) for receiving the original color signal including a plurality of separate color point remappings, wherein the processor remaps the original color signal into one or more color blind compensated signals by remapping color points for compensating for at least a first type of color blindness; and

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display circuitry (6 or 75) for displaying the original color signal and the one or more color blind compensated color signal.

Yui does not specifically disclose displaying the original color signal and the one or more color blind compensated color signals simultaneously.

Yui does not particularly disclose color remapping that are non-modifiable by a user of the video system.

However, Ueda et al teaches color adjustment device including a display circuitry for displaying the original color signal and the adjusted color signal simultaneously (col. 1, lines 29-40).

Atkinson further teaches color vision deficiency correction system including automatic adjustment of color computer displays to settings that are optimal for certain such deficiencies (abs.). In other words, Atkinson teaches color remapping that are non-modifiable by a user (automatic adjustment) of the video system.

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing a real time video system for displaying color images that are adjusted from original color images as taught by Yui to incorporate the well known concept of displaying the original color signal and the adjusted color signal simultaneously as taught by Ueda et al so that the observer can easily analyze the difference between the original color image and the adjusted color image, thereby creating an user's custom input as desired, and further incorporate the Atkinson's teaching so as to display settings that are optimal for color blind people.

Regarding claim 2, Yui discloses a processor (7), for outputting two color blind compensated signals for compensating for the first and a second type of color blindness, and means for selecting to output one of the first and the second adjusted color signals (col. 4, lines 7-24).

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Regarding claim 3, Yui discloses series of ordered sets of original samples, wherein the adjusted color signal is associated with a series of ordered sets of samples according to a first color adjustment predefined for first type of color blindness (9 or 88) as specified.

Regarding claim 4, Yui discloses memory (9 or 88) coupled with the processor and having stored therein the sets of original values and the first set of adjusted values.

Regarding claim 5, Yui discloses means for combining the original samples of a single ordered set thereby generating a single sample for inputting into the memory as an address (12, 7) as specified.

Regarding claim 6, Yui discloses the memory reading out a single sample for each ordered set of original samples, and the means for extracting sample output by the memory an ordered set of adjusted samples (col. 3, lines 23-67) as specified.

Regarding claim 36, Yui discloses remapping color points from original signal by using a color look up table (Fig. 4, 9).

Regarding claim 37, Yui discloses remapping color points from original signal by using a color transformation algorithm (Fig. 4, 10).

Regarding claim 12, Yui discloses a real time video method for adjusting real time color images encoded in a video signal for producing a display, comprising:

decoding the video signal into at least one original color signal (Fig. 8, 87);

using a reference color image to generate one reference color signal, and generating an adjusted color signal from the reference color signal according to a tested transform (Figs. 1-2, 4, and 7).

applying the adjusted signal to the screen for displaying color images (col. 1, lines 48-56);

accepting an input from a viewer as to whether the adjusted reference image is desirable, and if the adjusted reference image is desirable, using the tested transform (Figs. 1-2, 4, and 7).

Yui does not specifically disclose partitioning the screen into a plurality of sections, and wherein the adjusted reference image is displayed in only one of the sections.

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Further, Yui does not particularly disclose the transform that are non-modifiable by a user of the display.

However, Ueda et al teaches color adjustment device including a display circuitry for displaying the original color signal (one section) and the adjusted reference color signal (other section) simultaneously (col. 1, lines 29-40).

Atkinson further teaches color vision deficiency correction method including automatic adjustment of color computer displays to settings that are optimal for certain such deficiencies (abs.). In other words, Atkinson teaches the transform that are non-modifiable by a user (automatic adjustment) of the display.

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing a real time video system for displaying color images that are adjusted from original color images as taught by Yui to incorporate the well known concept of displaying the original color signal and the adjusted color signal simultaneously as taught by Ueda et al so that the observer can easily analyze the difference between the original color image and the adjusted color image, thereby determining an amount of color adjustment data as desired, and further incorporate the Atkinson's teaching so as to transform settings that are optimal for color blind people.

5. Claims 15, 17, and 39-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yui (5,677,741)

Regarding claims 15 and 39, the Examiner takes official notice that EPROM is conventional memory device well known in the art. Therefore, it would have been obvious to utilize EPROM as a primary source of data storing device.

Regarding claims 17 and 41, the Examiner takes official notice that rotating such as a portion of region is well known in the image processing art. Therefore, it would have been obvious to rotate the portion of region for a better interaction between an user and a screen menu.

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Regarding claim 40, the Examiner takes official notice that a type of color blindness, deuteranope, is well known and defined as green (G) or red (R) color blindness. Therefore, it would have been obvious to select deuteranope, since the conventional display color is in R, G, and B format.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 14, 16, 38, and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Yui (5,677,741).

Regarding claim 14, Yui discloses a method for adjusting real time color images encoded in a video signal for producing a display, comprising:

- decoding the video signal into at least one original color signal (Fig. 8, 87);
- digitizing the original color signal to produce at least one original value (Fig. 7, 78);
- generating an adjusted the color signal from the original color signal according to a first transform (Fig. 7, 77) by looking up in a memory an adjust value (Fig. 8, 88);
- applying the adjusted signal to the screen (col. 1, lines 48-56) for displaying color images adjusted (Fig. 7, 75) for a type of color blindness;
- selecting a set of coordinates for defining a color space (Fig. 4, HOST PROFILE);
- selecting a type of color blindness (Fig. 4, 7);
- characterizing the selected type of color blindness with respect to the coordinates as at least one discernible region in the color space (Figs 5A-5C);

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selecting a color gamut adjustment that maps at least one region outside the discernible region into the discernible region (Fig. 4, DISPLAY PROFILE);

generating the original values and the adjusted values that perform the color gamut adjustment (Col. 4, lines 7-21); and

storing the original values and the adjusted values in a look up table in the memory (Fig. 4, 9 or 10).

Regarding claim 16, Yui discloses contracting a portion of the discernible region (Fig. 5C)

Regarding claims 38 and 42, Yui discloses a method for generating a color blindness compensating remapping table, comprising:

selecting a set of coordinates for defining a reference color space (Fig. 4, HOST PROFILE);

selecting a type of color blindness (Figs. 1 or 4, 7);

relating the selected type of color blindness to the coordinates of reference color space to define a discernible region for the selected type of color blindness (Figs 5A-5C);

selecting a color gamut adjustment that maps at least one location in the reference color space that is outside the discernible region into the discernible region (Fig. 4, DISPLAY PROFILE);

generating original values identifying locations within the reference color space (Fig. 5A);

generating shift values from the original values based on the color gamut adjustment (Figs. 5B, 5C)

relating the original values and the shift values in a look up table in the remapping table (Fig. 4, 9).

Furthermore, claim 42 is considered inherent/redundant features simply repeating claim 38, since the method for generating remapping table would simply restart from the beginning of the method when a different user wishes to modify the color compensated display.

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Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawn An whose telephone number (703) 305-0099 and schedule are Tuesday through Friday.

 SHAWN S. AN
PATENT EXAMINER

SSA

July 13, 2003